Claims:

1. A method for winding and knotting a thread around a sewing thread of a button for clothes, comprising the steps of:

(a) fixing one end of the thread to the sewing thread of the button, and extending the thread to wind around the sewing thread of the button in a circular shape;

(b) further extending the thread to wind around the sewing thread of the button at least once in the same direction of the preceding winding;

(c) allowing the circular portion of the thread to pass over the sewing thread; and

(d) forming a double-twisted knot of the thread by drawing the other end of the thread.

2. The method as set forth in claim 1, wherein the thread is extended to wind around the sewing thread of the button once in the same direction of the preceding winding, in step (b).

3. The method as set forth in claim 1, wherein the extended thread winds around the sewing thread of the button, in the circular shape in a clockwise or counterclockwise direction, in step (a).

4. The method as set forth in any one of claims 1 to 3, further comprising the step of (e) winding the thread around the sewing thread of the button at least once before or after all of steps (a), (b), (c), and (d) are performed.

5. The method as set forth in any one of claims 1 to 3, wherein all of steps (a), (b), (c), and (d), and step of (e) winding the thread around the sewing thread of the button at least once, before or after steps (a), (b), (c), and (d) are performed, are alternately performed.

6. An apparatus for winding and knotting a thread around a sewing thread of a button for clothes, comprising:

a base, on which a plurality of components are installed;

button-holding means installed on the base for holding the button;

knot-guiding means installed in front of the button-holding means for

guiding the thread so that the thread passes over the sewing thread protruded from the button held by the button-holding means to form a knot;

winding means, installed on an upper surface of the base, including a conveying stand moving back and forth toward the button-holding means, a winding arm for winding the thread around the sewing thread of the button, and first driving means for rotating the winding arm;

thread take-up means, installed on the base, including a thread hole formed through one side thereof for passing the thread and a thread take-up member for straining the thread when the thread passes over the sewing thread of the button;

second driving means installed on the base for simultaneously supplying power to the knot-guiding means and the thread take-up means; and

tension means, for adjusting the tension of the thread, including a first tension member and a second tension member, between which the thread take-up means is positioned.

7. The apparatus as set forth in claim 6, wherein the knot-guiding means includes guide arms having arc-shaped upper ends so that the arc-shaped upper ends face each other and outer circumferences of the upper ends form a circle.

8. The apparatus as set forth in claim 6, wherein guide grooves, in which the thread is inserted, are respectively formed in the outer circumferences of the arc-shaped upper ends.

9. The apparatus as set forth in claim 6, wherein lower parts of the guide grooves have a depth smaller than those of other parts of the guide grooves.

10. The apparatus as set forth in claim 6, wherein the knot-guiding means includes:

bar-shaped guide arms, in a pair, positioned below the lower surface of the base and extended upwardly through a through hole of the base;

a guiding means-conveying member inserted into the lower ends of the guide arms and installed on a feed shaft for allowing the knot-guiding means to move back and forth;

gears respectively fixed to the lower ends of the guide arms so that the

gears are engaged with each other; and

a driving plate fixed to the lower end of one of the guide arms in a pair.

11. The apparatus as set forth in claim 10, wherein the knot-guiding means further includes a first rod having one end fixed to a designated position of the driving plate and the other end connected to a stationary shaft placed at a designated position of the lower surface of the base around the knot-guiding means.

12. The apparatus as set forth in claim 6, wherein the winding arm of the winding means includes:

a first tubular member connected to a rotary shaft of the first driving means by a belt;

a connection arm connected to one end of the first tubular member at right angles; and

a second tubular member connected to the connection arm at right angles and extended toward the button-holding means in parallel with the first tubular member.

13. The apparatus as set forth in claim 12, wherein the first tubular member includes an outlet, for taking the thread therefrom, formed through one end thereof connected to the connection arm.

14. The apparatus as set forth in claim 6, further comprising a thread-straining member having one end, which is fixed to the thread take-up means by a pin, and the other end, which is freely rotatable and has a thread hole formed therethrough.

15. The apparatus as set forth in claim 6, wherein the second driving means includes:

a second driving motor attached to the lower surface of the base;

a driving plate installed on a driving shaft of the second driving motor;

a second rod provided with one end fixed to the driving plate by a rotary pin and extended in parallel with the driving plate;

a third rod provided with one end connected to the other end of the second rod and the other end fixedly connected to the other gear of the gear unit of the

thread take-up means; and

a fourth rod provided with one end connected to one end of the third rod and the other end connected to the driving plate of the knot-guiding means for supplying power of the second driving motor simultaneously to the knot-guiding means and the thread take-up means.